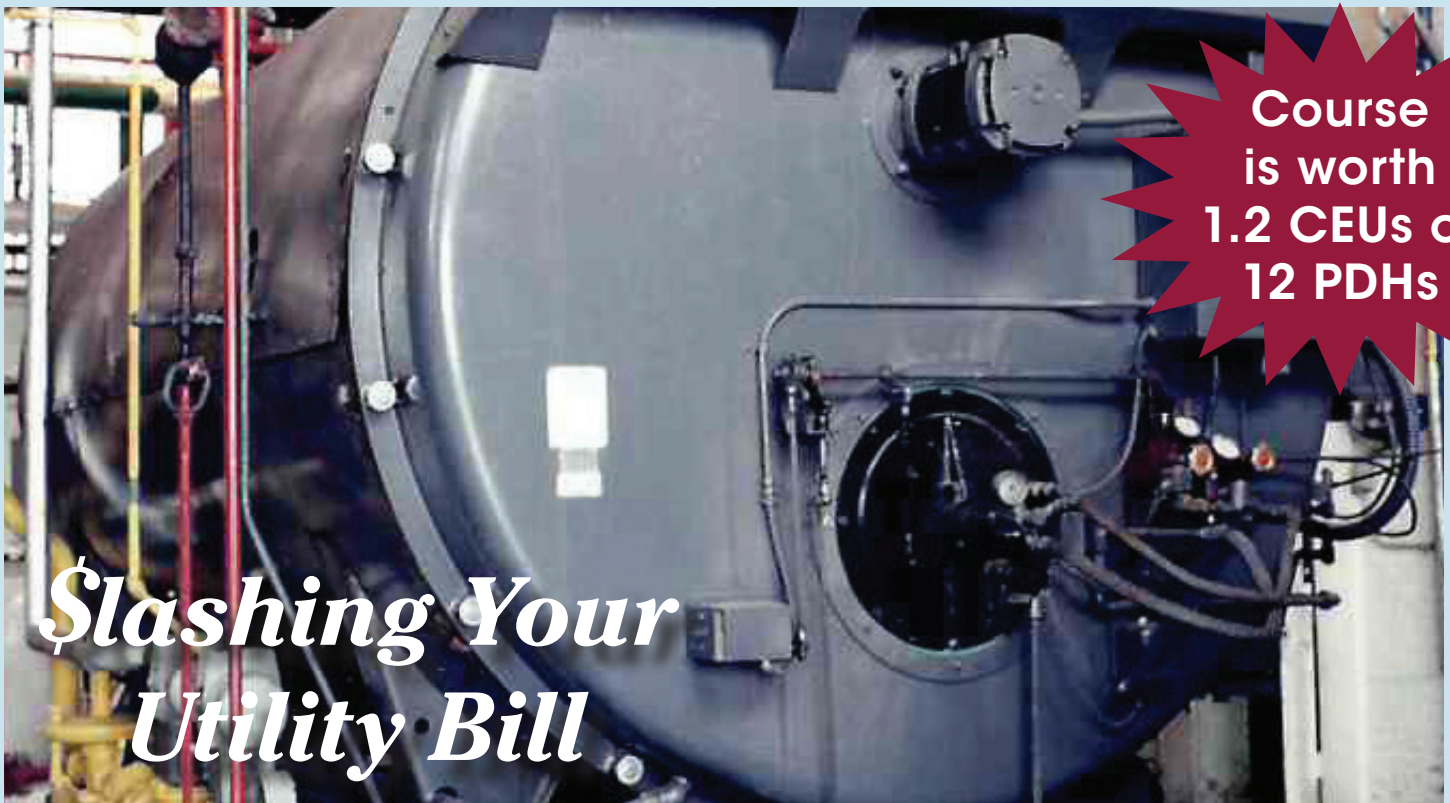


The Boiler Efficiency Institute Presents
Two-Day Virtual Workshop
Presented through Zoom on
**Steam Plant
Improvement**
For Industrial, Commercial and Institutional Facilities



Course
is worth
1.2 CEUs or
12 PDHs

***Slashing Your
Utility Bill***

May 11-12, 2021 • Tuesday & Wednesday

The goal of the workshop is to train a range of South Carolina professionals such as boiler operators, technicians, licensed engineers and registered architects in energy efficiency measures.

Each attendee will receive a minimum of 12 hours of virtual training over two consecutive days. Certificates for Professional Development Hours will be presented to all participants upon successful completion of the workshop. **The workshop is offered for a low price of \$25.**

**REGISTRATION by phone: (334) 821-3095
by fax: (334) 887-3757 or email: melanie@boilerinstitute.com**

Program Sponsored by the



Proven Methods

...To Reduce Steam Plant Costs with
a Minimum of Up-Front Expenditure

A must source of practical
information for both technical and
non-technical personnel:

- Plant and facility personnel
- mechanical equipment operators
- building owners/managers
- consulting engineers
- equipment/chemical vendors
- utility managers
- production managers
- A&E personnel

Program Objective

The objective is to develop the participant's ability to recognize cost-saving measures in a steam plant and then to implement the necessary changes to realize these savings. The measures to be explored include low up-front cost, O&M procedures, fast payback heat recovery and cogeneration projects.

Additional objectives include showing participants the latest measurement instrumentation/techniques, safety equipment/testing, cleaning, storage, etc.

Background

The Boiler Efficiency Institute (BEI) has presented several hundred practical workshops on plant operation improvement for reducing costs over the last 25 years. Instructors spend as much time in boiler rooms as in classrooms.

Even in today's robust economy, savings from improving equipment performance offer exceptional opportunities to improve the bottom line. Unfortunately, many managers are not exploring energy-savings opportunities because of the perception that up-front costs are too high. BEI has updated its course to address these new economic requirements. This course will show the participants how to recognize operation and maintenance changes that require little up-front cost and then what changes to make. Additionally, heat recovery and cogeneration techniques yielding fast paybacks will be explained so that the participants know what methods are applicable and how to implement these methods.

The team has no vested interest in any product. All information will be presented from an objective viewpoint based on the experience and expertise of the lecturers. We feel that this is an important advantage over "free" programs presented by vendors.

Program Support

The South Carolina Energy Office has contracted with the Boiler Efficiency Institute to provide training in boiler efficiency and operation.

The course fee is normally \$795, but due to the support of the ORS Energy Office, the program is offered at a reduced rate of \$25 to residents and employees of South Carolina. Class is limited to 30 attendees. Please register early to ensure your space!

RESOURCE MATERIALS

Each participant will be provided a textbook which will serve as a valuable resource guide after attending the course. The book retails for \$25 which is the total cost of the course! **Any materials presented will be generic in nature. No individual company or particular product will be promoted or endorsed.**

Workshop Outline

FIRST DAY (8 a.m. - 4 p.m. EST)

REGISTRATION

WELCOME

OVERVIEW OF PROGRAMS

Background and Scope
Economics of Energy

BOILER TYPES

Firetube and Watertube • Hot Water Generator
Electric • Steam Generators
Gas Turbines and Diesels/Waste Heat Boilers

COMBUSTION CONTROLS

Types • Adjustment Techniques
Automatic Trim/Variable Speed Drives

REDUCING COSTS VIA OPERATIONS/MAINTENANCE

Tune Burner/Combustion Controls
Optimize Fuel-Firing Conditions • Choose Correct Fuel
Keep Fireside and Waterside Clean • Optimize Blowdown
Reduce Radiation and Purge Losses in Oversized Boilers
Optimize Steam Pressure • Optimize Boiler Loading
Optimize Fuel Atomization • Maintain Traps
Eliminate Condensate Losses
Optimize Deaerator Performance

REDUCING COSTS VIA HEAT RECOVERY

Conventional Economizer
Direct Contact Heat Recovery • Air Preheat
Blowdown • Boiler Room Heat • Vent Condenser

REDUCING COSTS VIA COGENERATION

Steam Turbine Cogeneration
Diesel and Gas Turbine Cogeneration

SECOND DAY (8 a.m. - 4 p.m. EST)

WATER QUALITY PROGRAM

Properties
Problems and Water Treatment
Determining Types and Amounts of Treatment

MEASUREMENT

Boiler and Combustion Efficiency
Trap Condition
Makeup and Blowdown Rates
Others

MAINTENANCE AND OPERATION

Reference Data • Computerized Maintenance System
Preventative Maintenance • Record/Data Keeping
Safety Requirements/Testing • Communication
Cleaning • Storage

PROGRAM DIRECTOR:

Melanie W. Knause, Boiler Efficiency Institute

P.O. Box 2255 • Auburn, AL 36831-2255

Phone (334) 821-3095 • FAX (334) 887-3757

email melanie@boilerinstitute.com

Four Ways To Register:

1. By Mail: Send Registration Form to
Program Director, B.E.I., P.O. Box 2255,
Auburn, AL 36831-2255.
2. By Phone: (334) 821-3095.
3. By FAX: (334) 887-3757.
4. By email: Send all the information requested in the
registration form to melanie@boilerinstitute.com.

Confirmation will be issued after payment is received.
Zoom link for class participation will be sent to email
on registration.

Registration Fee

Registration fee is \$25 and includes registration and textbook. The textbook will be mailed before the course takes place. A Certificate of Participation will be mailed after the course to each registrant who attends both days. The certificate will state the attendee earned 1.2 CEUs or 12 PDHs.

Seminar Hours

Seminar Hours are 8:00 a.m. to 4:00 p.m. EST both days.

Cancellation, Substitution and Transfer Policy

If you are unable to attend the course, you can substitute another person in your place.

Cancellations must be made 14 days before the program date for full refund.

Instructors

Tom Burch, Ph.D., P.E.

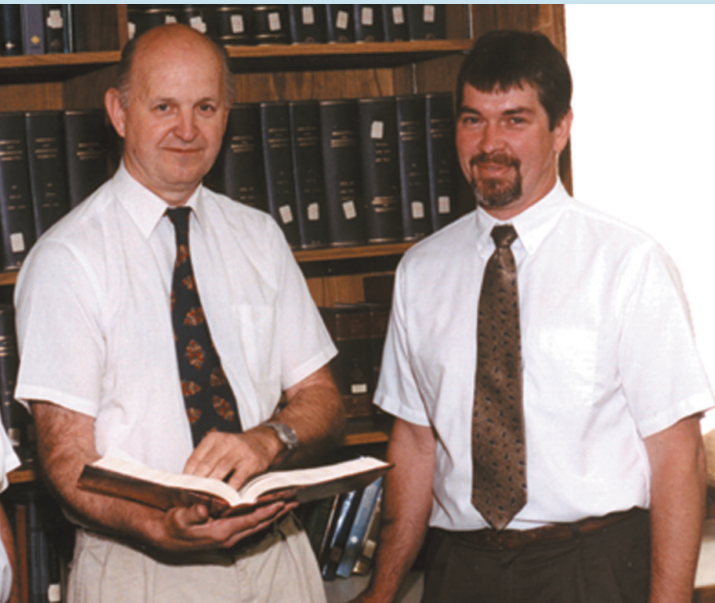
Professor of Mechanical Engineering, Auburn University

David Dyer, Ph.D., P.E.

Professor of Mechanical Engineering, Auburn University

David Burch, M.S.M.E., P.E.

Engineer, Boiler Efficiency Institute



The instructors have a combined total of **over 100 years of experience** with facilities in operation, design, testing and troubleshooting. They have written twelve practical books detailing this experience, as well as numerous technical papers and reports. They have presented more than 500 workshops concerned with reducing facility operating costs. During this period, they have gained extensive, hands-on experience in evaluating **money-saving opportunities** at hundreds of facilities.

The instructors are known for their teaching style which combines a sound technical presentation in

an enjoyable and easy-to-understand approach. The program will appeal strongly to all persons involved with facilities regardless of their educational and experience background.

REGISTRATION FORM

**May 11-12, 2021
(Tuesday &
Wednesday)
Virtual Boiler Course**

*Checks Payable to
BOILER EFFICIENCY
INSTITUTE, LLC
P.O. Box 2255
Auburn, AL 36831-2255

Fee: \$25

☐ Check Enclosed*

Credit Card: ☐ MasterCard ☐ Visa ☐ AmEx Expiration Date: _____

Card No. _____

CVV Security Code _____ Billing Zip Code _____

Name of Attendee _____

Company _____

Address _____

City _____ State _____ Zip _____

E-mail _____

Phone _____ FAX _____